

Claims

1. A radio base station comprising a monitor (31), memory (33, 49) and one or more resources (35(i), 37(j), 39(k), 41(m), 43(n), 45(o), 47(p)), said memory (33, 49) being connected to the monitor (31) and arranged for storing tasks and data, each of said resources (35(i), 37(j), 39(k), 41(m), 43(n), 45(o), 47(p)) being connected to the monitor (31) and arranged for at least one of performing a function and executing a program, wherein said tasks are stored in an XML format.
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- 10 2. Radio base station according to claim 1, wherein said resources (35(i), 37(j), 39(k), 41(m), 43(n), 45(o), 47(p)) that are arranged to execute a program are also arranged to generate trigger signals and send them to the monitor (31), said monitor (31) being arranged to receive said trigger signals, to read one or more tasks related to said trigger signals from said memory (33, 49), to check whether resources required for 15 performing said task are available and sending commands to selected resources specifying the task to be performed.
- 20 3. Radio base station according to claim 1, wherein connections between said memory (33, 49) and said monitor (31), and between said resources (35(i), 37(j), 39(k), 41(m), 43(n), 45(o), 47(p)) and said monitor are implemented by means of a bus (51).
- 25 4. Radio base station according to claim 3, wherein said resources (35(i), 37(j), 39(k), 41(m), 43(n), 45(o), 47(p)) are arranged for mutual communication via said bus (51).
5. Radio base station according to claims 3 or 4, wherein using the bus (51) is based on a datagram principle.
- 30 6. Radio base station according to any of the preceding claims, wherein said memory (33, 49) comprises a task memory (33) and a data memory (49).

7. Radio base station according to any of the preceding claims, wherein said monitor (31) comprises a state machine sequencer (79) for handling several state machines in parallel.

5 8. Radio base station according to claim 7, wherein said memory comprises a ROM portion (61) and a RAM portion (59), said ROM portion (61) storing state machine definitions for said state machine sequencer (79), task definitions and default structures, said RAM portion (59) storing dynamic data.

10 9. Radio base station according to claim 8, wherein said RAM portion (59) stores a resource allocation table (63), a data block list (65), and data blocks (67).

10. Radio base station according to any of the claims 1-8, wherein said monitor (31) comprises an executor (77) arranged for:

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- sending commands to resources;
- sending task block requests to memory (33, 49);
- receiving status information from resources;
- receiving task blocks from memory (33, 49).

20 11. Radio base station according to claim 9, wherein said monitor (31) comprises an executor (77) arranged for:

- sending commands to resources;
- sending task block requests to memory (33, 49);
- receiving status information from resources;
- 25 • receiving task blocks from memory (33, 49);
- maintaining said resource allocation table (63).

12. Radio base station according to any of the preceding claims, wherein said resources comprises at least one of: a transmitter (35(i)), a receiver (37(j)), an analogue signal manifold (39(k)), a digital analogue converter (41(m)), an analogue digital converter (43(n)), a control unit (45(o)), and a digital signal processor (47(p)).

13. Radio base station according to claim 12, wherein said resources comprise at least one digital signal processor (47(p)) storing an executable image for performing a program.

5 14. Radio base station according to any of the preceding claims, wherein said XML defined tasks comprise bricks created with document template definitions.

10 15. Radio base station according to any of the preceding claims, wherein said XML defined tasks comprise at least one of: task name, priority, definitions of resources required, definitions of channels between resources, definitions of data blocks to be used, definition of commands for resources, definitions of code segments to be used by processors of resources, and status of resources.

15 16. Radio base station according to claim 15, wherein said definitions of data blocks have the following structure definition:

STRUCTUREDEFINITION.DTD
<!ELEMENT structuredefinition (structurename, structureblock)>
<!ELEMENT structurename (# BLOCKNAME)>
<!ELEMENT structureblock (# TEXT)>

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BLOCKLIST.XML
<structuredefinition>
 <structurename> *blocklist* </structurename>
 <structureblock>

25

 “Contents of block in text”

 </structureblock>
</structuredefinition>

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17. Method of operating a radio base station comprising a monitor (31), memory (33, 49) and one or more resources (35(i), 37(j), 39(k), 41(m), 43(n), 45(o), 47(p)), said memory (33, 49) being connected to the monitor (31) and storing XML defined tasks and data, each of said resources (35(i), 37(j), 39(k), 41(m), 43(n), 45(o), 47(p)) being connected to the monitor (31), said method comprising:

- at least one of performing a function and executing a program by said resources (35(i), 37(j), 39(k), 41(m), 43(n), 45(o), 47(p)),
- reading one or more XML defined tasks from said memory (33, 49),
- checking whether resources required for performing said one or more XML defined tasks are available and
- sending commands to selected resources specifying a XML defined task to be performed.

18. Computer program product storing instructions and data to be loaded by a radio
10 base station comprising a monitor (31), memory (33, 49) and one or more resources
(35(i), 37(j), 39(k), 41(m), 43(n), 45(o), 47(p)), said memory (33, 49) being connected
to the monitor (31) for storing XML defined tasks and data, each of said resources
(35(i), 37(j), 39(k), 41(m), 43(n), 45(o), 47(p)) being connected to the monitor (31),
said computer program product, after being loaded, allowing said monitor (31) to:

- read one or more XML defined tasks from said memory (33, 49),
- check whether resources required for performing said one or more XML defined tasks are available and
- send commands to selected resources specifying a XML defined task to be performed.

20 19. A data carrier comprising a computer program product according to claim 18.